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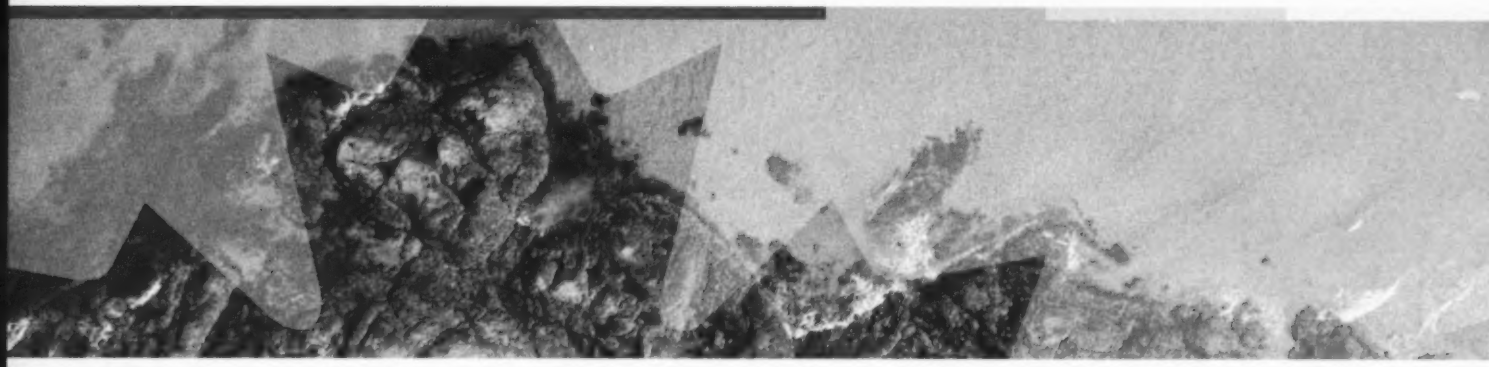
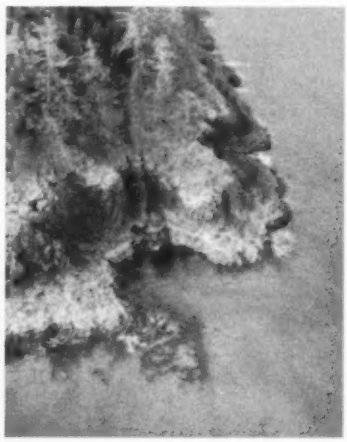


UPDATING SHORELINE INFORMATION FOR THE CENTRAL-NORTH BRITISH COLUMBIA COAST

SHORELINE CHARACTERIZATION

Environment and Climate Change Canada has created a database that contains a range of information that describes Canada's coast and shoreline. This information helps emergency responders to better plan and prepare for potential marine pollution events. For example, knowing what the shore looks like helps emergency officers better plan their onsite response and clean-up activities in the event of a spill. The database can also provide important information about the state of the shore prior to a pollution event.

Environment and Climate Change Canada always welcomes new information that meets established standards to expand its database to better support environmental emergencies preparedness and response.



HOW IS THE SHORELINE CHARACTERIZED?

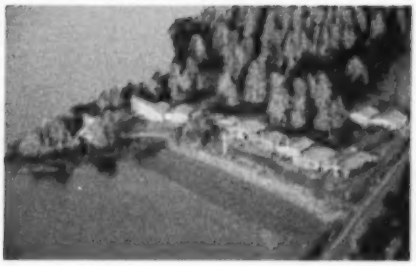
There are two complementary ways to characterize the shoreline, both with their own standards.

1) COLLECTING GEOTAGGED VIDEOS

- Low-altitude helicopter surveys are conducted along the British Columbia coast to capture video of the shoreline.
- The camera focuses primarily on the upper part of the intertidal zone (the area of the shore between the high- and low-watermark). An audio commentary provides additional information, including a broader description of the shore.
- These videos can be viewed in a web-portal. Any location along the flight path can be selected, and a moving cursor shows the helicopter's location.

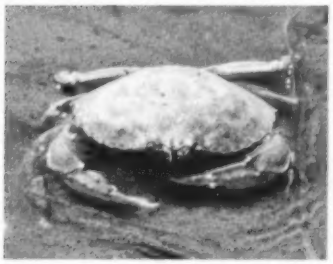
2) CREATING A SHORELINE DATABASE

- Shoreline segmentation means that the shoreline is split into segments and classified in a GIS (Geographic Information System).
- Each segment identifies the physical characteristics of the shoreline geomorphology in a database. Examples include substrate types (hard rock, semi-lithified sediment, sand, mud) and landform types (beaches, cliffs, shore platforms, rocky slopes).
- Interpreters divide the shoreline into alongshore segments according to changes noted in the upper intertidal zone. Other biological data (such as bird colonies, eelgrass meadow or kelp bed, marine mammal breeding/foraging areas) is also collected and incorporated in the database



PRODUCTS

- The shoreline classification and its data can be combined with other coastal information in a database to produce maps that can be used when making decisions around events such as spills.
- Geo-located photos and videos can be easily accessed and viewed through various web-portals.



PROGRESS AND NEXT STEPS

- The shoreline characterization for the Kitimat-Douglas Channel area, including Haida Gwaii, has been completed using 2013-2015 aerial imagery.
- Environment and Climate Change Canada is currently working to complete the mapping of the BC coast from Alaska to Washington, beginning with the North/Central region. Interested partners and stakeholders may contribute information to this mapping project, provided it meets certain standards. In addition, flights may be undertaken in 2018-2019.

ECCC SHORELINE TYPE

- Bedrock Cliff/Vertical
- Bedrock Platform
- Bedrock Sloping/Ramp
- Boulder Beach or Bank
- Man-Made Permeable
- Marsh
- Mixed Sediment Beach or Bank
- Mixed and Coarse Sediment Tidal Flat
- Mud Tidal Flat
- Pebble/Cobble Beach or Bank
- Sand Beach or Bank
- Sand Tidal Flat

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